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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,286	03/12/2004	Kenneth E. Davis	DA V001-082	5177

7590 05/23/2008

Whirlpool Patents Company MD 0750
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EXAMINER	
NORMAN, MARC E	
ART UNIT	PAPER NUMBER
3744	
MAIL DATE	DELIVERY MODE
05/23/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/798,286	DAVIS ET AL.	
	Examiner	Art Unit	
	Dr. Marc E. Norman	3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 February 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,6,8-18 and 20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1-4,6 and 8-15* is/are allowed.

6)☒ Claim(s) *16,17 and 20* is/are rejected.

7)☒ Claim(s) *18* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments/Amendments

Applicant's amendments overcome the previously applied rejections set forth in the Office Action of 14 January 2008. However, upon an updated search new rejections of claims 16, 17, and 20 are set forth below. The Examiner apologizes that these rejections were not set forth earlier in the prosecution.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 16, 17, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kang in view of Grald et al.

As per claims 16, Kang teaches a refrigeration control method comprising sensing a temperature in the compartment (sensor 150), an ambient temperature (circumferential temperature 120) and varying the speed of the compressor based on the sensed temperature in the compartment and a desired operating temperature (see for example claim 1, lines 6-9). Kang does not teach varying an operational speed on the evaporator fan based on the operational speed of the compressor. However, refrigeration systems wherein a compressor is controlled by a desired/sensed temperature of a conditioned space and the evaporator fan speed is in turn controlled by the speed of the compressor are old and known in the art. Grald et al. teaches a variable capacity refrigeration system wherein a compressor is controlled by a desired/sensed temperature of a conditioned space and the evaporator fan speed is in turn controlled by the speed of the compressor (see for example column 2, lines 7-12). Even though Grald et al. is directed to an air conditioning system rather than a refrigerator, the same basic principles apply regarding controlling aspects of the refrigeration cycle in order to control the cooling of a conditioned space. It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply this evaporator speed control step of Grald et al. to the refrigeration system of Kang for the purpose of efficiently controlling the temperature in the refrigerated space.

As per claim 17, While Kang does teach incorporating other factors contributing to compressor speed, Grald et al. teaches the compressor speed being controlled solely by the sensed/desired temperature (again, column 2, lines 7-12). It would have been obvious to one of ordinary skill in the art at the time the invention was made to similarly control a refrigerator

compressor solely based on the sensed/desired temperature since this is a basic simplified algorithm that simply does not incorporate more complex controls.

As per claim 20, Kang further teaches controlling the refrigeration system based on door opening signals (signal 140).

Allowable Subject Matter

Claims 1-4, 6, and 8-15 are allowed.

Claim 18 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Marc E. Norman whose telephone number is 571-272-4812. The examiner can normally be reached on Mon.-Fri., 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MN
/Dr. Marc E. Norman/
Primary Examiner, Art Unit 3744